
QMP v2.1 with Max Bad Blocks User Manual

General Description and Name

This scheme Implements skip block method for bad block handling, but allows the user to create partitions in the device.

The data file includes a header which indicates the beginning address of partition table and the beginning address of data.

Relevant User Options

The following special features on the special features tab apply to this scheme. The default values might work in some cases but please make sure to set the right value according to your system.

Please note only the below special feature items are related to this scheme and ignore any others. If any of below items doesn't exist, please check whether the right version has been installed or contact Data I/O for support by submitting Device Support Request through this address:

<http://www.dataio.com/support/dsr.asp>

Bad Block Handling Type = "QMP v2.1 with Max Bad Blocks"

Spare area : Please refer to "Description of common NAND special features.pdf". *Always set as "Enabled" for this BBM.*[Default 'Disabled']

Special Notes

Example of partition table:

NAND Flash Block			
Start Adr	End Adr	Actual Data Length	Max bad blocks
0x0	0x7FF	0x360	0x5
0x800	0xFFF	0x30	0x6
0xFFFFFFFF	0xFFFFFFFF	0xFFFFFFFF	0xFFFFFFFF
0xFFFFFFFF	0xFFFFFFFF	0xFFFFFFFF	0xFFFFFFFF
0xFFFFFFFF	0xFFFFFFFF	0xFFFFFFFF	0xFFFFFFFF
0xFFFFFFFF	0xFFFFFFFF	0xFFFFFFFF	0xFFFFFFFF
0xFFFFFFFF	0xFFFFFFFF	0xFFFFFFFF	0xFFFFFFFF
0xFFFFFFFF	0xFFFFFFFF	0xFFFFFFFF	0xFFFFFFFF
0xFFFFFFFF	0xFFFFFFFF	0xFFFFFFFF	0xFFFFFFFF
0xFFFFFFFF	0xFFFFFFFF	0xFFFFFFFF	0xFFFFFFFF
0xFFFFFFFF	0xFFFFFFFF	0xFFFFFFFF	0xFFFFFFFF
0xFFFFFFFF	0xFFFFFFFF	0xFFFFFFFF	0xFFFFFFFF
0xFFFFFFFF	0xFFFFFFFF	0xFFFFFFFF	0xFFFFFFFF
0xFFFFFFFF	0xFFFFFFFF	0xFFFFFFFF	0xFFFFFFFF
0xFFFFFFFF	0xFFFFFFFF	0xFFFFFFFF	0xFFFFFFFF
0xFFFFFFFF	0xFFFFFFFF	0xFFFFFFFF	0xFFFFFFFF

- Organization: N rows x 4 columns. Each column is 32-bits(4 Bytes), little endian byte ordering.

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- b. Each row describes the configuration of one partition. Up to N(not limited in theory) partitions can be used. If meet the row which is all 0xFFFFFFFF, it indicates partition end and stop partition scan.
 - c. Partition configuration:
 - Start Adr: the start block in the partition.
 - End Adr: the end block in the partition.
 - Actual Data Length: number of blocks to be programmed in the partition.
 - Max bad blocks: specify allowed max bad blocks in the partition.

Please also note to keep: Actual Data Length + max bad blocks allowed \leq End Adr - Start Adr + 1

The data file must have a header which includes a partition table.
The spare area is always programmed with the user data in this scheme.
The start block of each partition will be fixed to a particular physical block. If that block is bad, it is acceptable to move to the next good block.

Revision History

V1.0 August 10, 2015
Create this spec.

Appendix

You can get the file "Description of common NAND special features.pdf" from <http://ftp.dataio.com/FCNotes/BBM/>